

Notice of Allowability

Application No.

10/609,443

Examiner

Helene Klemanski

Applicant(s)

CHOI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to RCE filed November 10, 2005.
2. ☒ The allowed claim(s) is/are 30 and 32-53.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

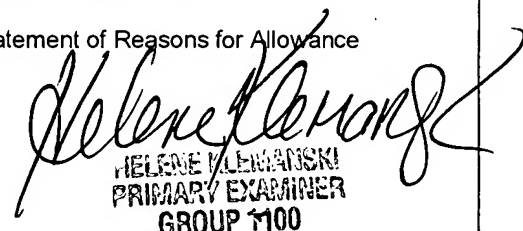
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 11/10/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


HELENE KLEMANSKI
PRIMARY EXAMINER
GROUP 1100

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 10, 2005 has been entered.

Information Disclosure Statement

2. The references cited in the Search Reports dated November 14, 2002 and February 12, 2003 have been considered.

Applicants should note that the examiner has cited U.S. Patent Application Publication 2001/0030366 since this reference was not included on applicants Information Disclosure Statement filed November 10, 2005 but was present on the search report.

EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

The application has been amended as follows:

In claims 32-34, line 1, the number "31" has been replaced with the number "30".

REASONS FOR ALLOWANCE

4. The following is an examiner's statement of reasons for allowance: This application teaches a method comprising storing for at least two days a solution containing a subset of a group consisting of a metal ion, a complexing agent, an ammonium salt, and a strong base, wherein the subset includes at least two components of the group; and nearer to the time of use in an electroless deposition process, using the solution to form a second electroless deposition solution containing the entire group. The closest prior art of record is EP1022770, US 2003/0113576, issued to Chebiam et al. and U.S. 6,471,845, issued to Dukovic et al. EP1022770 teaches that an electroless plating liquid is prepared by; (1) mixing a salt of copper or nickel, the glycine and the ammonium succinate to form a first solution; (2) adjusting the pH by adding aqueous ammonia to form a second solution and (3) adding the ammonium hypophosphite and the surfactant to the second solution to form the electroless plating solution (i.e. final or fresh plating solution). Chebiam et al. teach that an electroless plating liquid is prepared by; (1) mixing a metal ion and the ammonium sulphate to form a first solution; (2) adjusting the pH by adding tetramethylamine hydroxide to form a second solution; (3) after the second solution is at a preferred pH and temperature the primary reducing agent and the optional secondary reducing agents are added to the second solution to form a third solution and (4) the third

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solution (i.e. final or fresh plating solution) is applied to a substrate to cause electroless deposition of the metal. Both references fail to teach or fairly suggest storing of any of the intermediate solutions for at least two days as claimed by applicants. Dukovic et al. teach a method and apparatus for controlling the chemical composition of a plating bath by a dosing system that includes storing additives such as A, B and C into bottles (for up to three days) which are then added to fresh plating solution through bulk delivery lines. The additives A, B and C appear to be additives for replenishing the plating solution, which has already been formed (see col. 11, line 30 – col. 12, lines 55). Upon further consideration, it is the examiner's position that Dukovic et al. does not teach storing of any intermediate solution containing at least two components of the final plating solution which is then added to further components of the plating solution to form fresh plating solution but rather teaches the storing of the additives (for up to three days) that are to be added to the fresh plating solution that has already been formed. Dukovic et al. in no way teaches or fairly suggests that the fresh plating solution is prepared with intermediate solutions that are stored and then mixed together at the time of plating to form fresh plating solution as claimed by applicants. Therefore, it would not have been obvious to one having ordinary skill in the art to have stopped preparing the plating solution of EP1022770 or Chebiam et al. before forming the final plating solution and store one of the intermediate solutions for two days since Dukovic et al. teach that the fresh plating solution is provided without storage. Accordingly, this application is allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Klemanski whose telephone number is (571) 272-1370. The examiner can normally be reached on Monday-Friday 5:30-2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helene Klemanski
Primary Examiner
Art Unit 1755



HK
December 12, 2005